DOCUMENT RESUME

ED 150 162 TM 006 804

AUTHOR	Streedbeck, Darlene; Hughes, Robert B.
TITLE	[The Verbal Peer Adult Emotional (VPAE) Scale and Manual. A Behavioral Rating Scale for Measuring the Progress of Severely Maladaptive Children.]
PUB DATE	75
NOTE	67p.
AVAILABLE FROM	Problems in Living Center, 2000 S. Summit, Sioux Falls, South Dakota 57105 (Manual $3.00, Scale Booklets, 1-9 copies, $1.00 ea., 10 Booklets, $4.00)
EDRS PRICE	MF-$0.83 Plus Postage. HC Not Available from EDRS.
DESCRIPTORS	*Adjustment (to Environment); Adults; *Behavior Rating Scales; Childhood; Custodial Mentally Handicapped; Early Childhood; *Emotionally Disturbed Children; Emotional Maladjustment; Emotional Response; Institutionalized Persons; Interpersonal Relationship; *Manuals; *Mentally Handicapped; Peer Relationship; Scoring; *Severely Handicapped; Social Relations; Speech Communication; Testing; Test Reliability; Test Validity; Verbal Communication
IDENTIFIERS	*Verbal Peer Adult Emotional Scale

ABSTRACT

The Verbal Peer Adult Emotional Scale (VPAE), a behavioral rating scale for measuring the progress of severely maladaptive children, covers four areas: verbal behavior, peer interaction, interaction with adults, and emotional behavior. The 16-item scale is designed for use with children between the chronological ages of two and nine years, who are in a residential, educational, or therapeutic setting for functionally retarded, maladaptive children. The VPAE can be administered and tabulated in less than ten minutes and was developed with the intention that it be administered monthly. It is suggested that a minimum of three raters per child per administration would represent an adequate sampling of behavior. No props are needed in administering the scale and the primary requirement for raters is familiarity with the child and the terminology of the measure. Although the VPAE was developed on a very small population, the reliability and validity data appear to be promising. Spearman Rank Correlation Coefficients between the VPAE and selected variables are presented. The VPAE, the manual--including instructions for scoring and interpretation, and all forms used with the VPAE are included. (EVH)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED150162

"PERMISSION TO REPRODUCE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY
Darlene Streedbeck
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) AND USERS OF THE ERIC SYSTEM."

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

THE VERBAL PEER ADULT EMOTIONAL

VPAE

SCALE

A Behavioral Rating Scale for Measuring the Progress of Severely Maladaptive Children

Darlene Streedbeck & Robert B. Hughes

Problems-in-Living Center, Sioux Falls, S. D.

Copyright 1975

TM 006 804

IM006 804

THE VERBAL PEER ADULT EMOTIONAL (VPAE) SCALE

A Behavioral Rating Scale for Measuring the Progress of Severely Maladaptive Children

Darlene Streedbeck - Robert B. Hughes

Problems-in-Living Center, Sioux Falls, S. D.

Copyright 1975

INSTRUCTIONS FOR SCORING THE VPAE

The behavior of each child is rated in each of four categories--Verbal Behavior, Peer Interaction, Adult Interaction, and Emotional Behavior. In turn, each category of behavior is subdivided into four dimensions--important variables that help determine a child's overall behavior in terms of that category. Each dimension is expressed in terms of increasingly more appropriate behavior, progressing horizontally from Level 1 (least appropriate) to Level 5 (most appropriate).

The scoring form is constructed in similar fashion, with cells for rating each child's behavior in terms of each of the four categories via the 16 dimensions.

The judgment of a child's rating for each of the dimensions should be based on his <u>most usual</u> behavior during the period of approximately the last week. Under each child's name, circle the letter corresponding to the level most closely approximating his behavior on each of the lettered lines. (Refer to the level numbers which are specified directly below the child's name.) For each child, for example, in each category of behavior, one "A" should be circled, one "B", one "C" and one "D". (See example below.)

When rating several children, time is saved by rating all children on one category, then all on the next category, etc.

VPAE SCORING FORM

Rater's Name John S. Date 12/3/75

Child's Name: Ann Sue Dick Kay Alan Mary

Level:	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
VERBAL	A (A) A A A B B (B) B B (C) C C C C D D (D) D D	A A A (A) A B B (B) B B C C C (C) C D D D (D) D	(A) A A A A (B) B B B B (C) C C C C (D) D D D D	A A (A) A A B B B (B) B C C (C) C C D D (D) D D	A (A) A A A (B) B B B B (C) C C C C D (D) D D D	A A A A (A) B B B (B) B C C C C (C) D D D D (D)
PEER	A A A (A) A B B (B) B B C (C) C C C D D (D) D D	A A A A (A) B B B (B) B C C C (C) C D D D D (D)	(A) A A A A (B) B B B B (C) C C C C D (D) D D D	A (A) A A A B B (B) B B (C) C C C C D D (D) D D	A A A (A) A B B (B) B B C (C) C C C D (D) D D D	A A A (A) A B B B B (B) C C (C) C C D D D (D) D

VERBAL BEHAVIOR

	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5
A	Sounds only.	Non-words, plus single words and names of objects.	Generally single words and names of objects.	Generally phrases (two or more words).	Phrases and sentences.
B	Always nonsensical and never related to the situational context.	Usually nonsensicaland seldom related to the situational context.	Some verbalizations are related to the situational context.	Generally in the context of the situation (may also relate experiences from other contexts sensibly but in a limited manner).	Almost always in context of the situation as well as relating experiences from other contexts sensibly and with some detail.
C	Possesses no communicative quality.	Seldom communicative.	Possesses occasional but inconsistent communicative quality.	Communicative speech is fairly generalized.	Speech is exclusively communicative.
D	Little or no modeling of single sounds.	Will model sounds or simple words.	Will model one word or word-by-word.	Will model phrases and some sentences.	Will model sentences reliably.

PEER INTERACTION

	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5
A	Avoids proximity, and so also avoids interaction.	Will allow or initiate proximity but no interaction.	Most commonly will allow or establish proximity only. Interactions are usually only offense or defense and /or unstructured, random and brief.	Some cooperative, recurrent interactions occur in specific situations that already possess some structure.	Child frequently engages in interactions and cooperative play and is capable of imposing structure if none exists.
B	Won't initiate interactions and won't tolerate another child's initiation.	Won't initiate interaction, but occasionally tolerates another child's initiation.	Won't initiate interaction, but will usually tolerate another child's initiation.	Tolerates another child's initiation, and will occasionally initiate interaction.	Tolerates other children's initiations and frequently initiates interaction.
C	Does not attend to other children's activities.	Occasionally attends to other children's activities.	Frequently attends to other children's activities.	Frequently attends to other children's activities, and occasionally tries to model or "copy" their behavior.	Frequently attends to other children's activities, and frequently models or "copies" their behavior.
D	Child does not react when another child aggresses against him or steals or disrupts his playthings.	Child usually over-retaliates when another child aggresses against him or steals or disrupts his playthings.	Child retaliates, without over-retaliating, when another child aggresses against him or steals or disrupts his playthings.	Child reacts with verbal protest and occasionally retaliation when another child aggresses against him or steals or disrupts his playthings.	Child reacts with verbal protest when another child aggresses against him or steals or disrupts his playthings.

ADULT INTERACTION

	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5
A	Little or no notice of adults; prefers objects to adults and treats adults as objects.	Limited notice of adults lacking discrimination between them. Frequently oblivious.	Frequently notices adults and starting to discriminate between them by changing behavior accordingly. Has brief periods of being oblivious.	Discriminates between adults by changing his behavior accordingly. Developing good awareness, noticing presence or absence, but not chains of interaction or overall patterns.	Very aware of adults and environment; shows age appropriate understanding of people's social positions;makes fine discriminations between adults beyond those requiring change in his behavior.
B	No interaction with adults is tolerated by the child.	Any interactions with adults are non-reciprocal and unstructured (characterized by physical contact and rudimentary nonverbal behavior).	Beginning to participate in structured interactions with adults (established interactive patterns: rhymes, finger games, conversation, or goal-oriented activity) if provided by adult; shows some reciprocity.	Will participate in a variety of structured interactions with adults if structure provided by the adult, usually demonstrating reciprocity.	Participates in structured interactions as well as frequently trying to change or impose his own structure.
C	Seldom approaches areas of human activity.	Seeks attention in an infantile or inappropriate manner; child's goal isunsophisticated (purely for "one-way attention").	Frequently seeks attention in a reasonably appropriate manner, but usually goal is unsophisticated.	Initiates in a reasonably appropriate manner, usually for a somewhat sophisticated goal (play, activity, interaction or meeting a physical need).	Frequently initiates interactions, almost always with a sophisticated goal in mind.
D	Little or no compliance; is basically resistive or oblivious, even to physical leads.	Responds to name, "come here", but otherwise very dependent on physical prompts, though seldom resists them.	Responds to some verbal commands and nonverbal cues, but still needs prompting.	Responds to most verbal commands and nonverbal cues with little or no prompting.	Basically very compliant with age-appropriate requests and cues.

EMOTIONAL BEHAVIOR

	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5
A	In terms of polarity of mood (happy - neutral - angry), child exhibits a very high proportion in one.	Child's polarity of mood displays some alternation between the two basic poles.	Child displays some diversity of mood, in that he uses more than two moods (e.g., happy, - sad - fear - angry).	Child displays a fairly wide diversity in emotion.	Child's diversity of emotion is largely age-appropriate, via new refinements and combinations of the four basic moods.
B	On a continuum of emotional expression, the child displays his feelings to an extreme (i.e. tantruming, extreme passivity or accivity) which is always inappropriate to the situation.	On a continuum of emotional expression, the child generally displays his feelings to an extreme, which is usually (but not always) inappropriate to the situation.	On a continuum of emotional expression, the child's emotional intensities vary between extreme and mild (appropriately brief and subdued displays of frustration, happiness or anger) and are appropriate to the situation approximately half of the time.	On a continuum of emotional expression, the child's emotional intensities are frequently mild; most, but not all intensities (including extreme) are appropriate to the situation.	On a continuum of emotional expression, the child's emotional intensities are usually mild; when extremes are displayed, they are appropriate to the situation.
C	Most (but not all) emotional displays appear unrelated to an apparent cause.	Negative emotional displays are elicited for many minor reasons such as blocking or interruption of inappropriate behavior, or attempts to present new situations.	Negative responses are elicited reliably for punishment, loss of a strong reinforcer, physical injury, or increased pressure and demands, or in very new situations.	Negative responses are elicited occasionally for punishment, loss of a strong reinforcer, physical injury, or increased pressure and demands, or in very new situations.	Negative responses are elicited for basically age-appropriate reasons.
D	Positive responses (i.e. laughter or affection) that are appropriate to the situation occur two or fewer times per day.	Positive responses that are appropriate to the situation occur three to six times per day.	Positive responses that are appropriate to the situation occur seven to ten times per day.	Positive responses that are appropriate to the situation occur eleven to fourteen times per day.	Positive responses that are appropriate to the situation occur fifteen or more times per day.

"PERMISSION TO REPRODUCE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY

Darlene Streedbeck

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) AND USERS OF THE ERIC SYSTEM."

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

VPAE

MANUAL FOR THE SCALE

A Behavioral Rating Scale for Measuring the Progress of Severely Maladaptive Children

Darlene Streedbeck & Robert B. Hughes

Problems-in-Living Center, Sioux Falls, S.D.

Copyright 1975

MANUAL FOR THE

VERBAL PEER ADULT EMOTIONAL

(VPAE)

SCALE

A Behavioral Rating Scale
for Measuring the Progress of
Severely Maladaptive Children

Darlene Streedbeck & Robert B. Hughes

Problems-in-Living Center, Sioux Falls, S. D.

Copyright 1975

TM006 804

ACKNOWLEDGEMENTS

The authors wish to express their thanks to Douglas K. Spiegel, Professor of Psychology at the University of South Dakota. He made an invaluable contribution to the statistical analyses by performing the optimal scaling and reliability computations for Table I through use of a computer. He also offered suggestions for publishing as well as greatly appreciated encouragement to the authors.

The authors also wish to thank the other staff of the Problems-In-Living Center who offered suggestions for revision of the scale, as well as participating in various mental exercises to verify validity or determine the best method of presentation.

The manuscript was repeatedly typed by Joellen Kreykes and Marian Stone, both of whom were thankfully tolerant of the authors' changing whims and sense of urgency.

TABLE OF CONTENTS

Acknowledgements ii

Background of the VPAE Scale 1

Rationale of the VPAE Scale. 5

Comments on Administering the Scale. 6

Statistical Analyses of the Scale. 8

Table I. Obtained Scale Values and Correlations. 10

Table II. Spearman Rank Correlation Coefficients between the VPAE & Selected Variables 16

Table III. Spearman Rank Correlation Coefficients between the VPAE & Observational Recordings. 17

Tabulation and Computation of VPAE Scores. . . 18

Method number one: short form tabulation. . 21

Method number two: long form tabulation . . 21

Possible Revisions & Future Development. . . . 22

References 26

Appendix I. List of Scales Reviewed and Reference List of Problems. . . . 29

Appendix II. Instructions for Scoring the VPAE and the VPAE Scale 39

Appendix III. Forms Used with the VPAE Scale. . 51

BACKGROUND OF THE VPAE SCALE

A review of Buros' Mental Measurement Yearbooks and other recent literature indicates the existance of many stimulus-centered scales for measuring various behaviors of children under twelve. However, given the residential setting and population of the authors' facility, need demanded that a fairly brief and simple-to-obtain measure be found for at least four behavioral areas that were of concern for all children in this population, but which were very difficult, impossible, and/or time-consuming to measure via observational techniques, or most well-known existing scales. The four behavioral areas of most concern were verbal behavior, peer interaction, interaction with adults, and emotional behavior.

Six criteria existed for the authors' population which severely limited the utility of most available scales. These were:

1) the scale must be designed basically for children under 12 years old; if the scale extends to ages greater than 12, then it should span the entire age range from 1 year to that age.
2) the scale must be stimulus-centered; that is, it should be filled out by adults who rate or score each child's behavior, rather than by the child himself. It must also not depend on peer ratings of a child's behavior.
3) the scale must measure the behavioral categories of verbal behavior, peer interaction, adult interaction and emotional behavior. If no one scale measures these behaviors, then a feasible combination of scales must be available to do so without involving an unreasonable amount of time to obtain the various measures.

4) the scale must not be specifically designed for children with physical handicaps.
5) the scale must be more than merely a screening test for the need for treatment--it must be capable of measuring progress.
6) for verbal behavior, the scale must be more than simply a measure of articulation or receptive language.

Using these criteria narrowed the field to a total of 32 scales, most of which possess one or more of a list of 10 commonly encountered problems. These 32 scales are listed in Appendix I, with all relevant information (as noted by column headings) which could be found for each scale. "Problem reference" refers to the numbers of the following problems:

1) the scale lacks individual measures of one or more of the four specified behavioral categories. For example, the scale may provide a number of questions regarding verbal and social behaviors, but no individual score or rating can be obtained on verbal behavior, peer interaction, etc.
2) the end points of the scale limit its use to only some children in the authors' facility population. The lower end may be too high for some children; the higher end too high for some, or too low for others.
3) the steps or intervals on the scales are too large to demonstrate progress on a monthly basis.
4) a large time investment is necessary for administering the scale: a/ 15 to 30 minutes per child per rater; b/ 30 to 45 minutes per child per rater; d/ more than 60 minutes per child per rater. The time necessary is increased considerably over this when

multiple raters are sampled, or two or more different scales are necessary to adequately sample all four behavioral categories.

5) the source of ratings is only one person or one observational sample. As pointed out above, considerably more time would be necessary to sample more staff or more behavior. In addition, for some scales, the end result of multiple samples would be difficulty in then obtaining an average measure for each child in each category.
6) data is presented nominally or categorically, rather than ordinally or in interval form. In other words, the product of the scale is a label, rather than a number on a continuum.
7) separate scores within behavioral categories are produced, with no logical way to relate them, and thus obtain a measure of overall functioning in that category. For example, the scale may rate aggression, cooperation, and degree of appropriate play with other children, but no overall rating or score is obtainable for peer interaction overall.
8) ratings are based on subjective, non-specific, antecdotal, or Freudian terms or theory. For example, descriptions contain references to "self-concept", "ego", "degree of identification with primary adults", or simply a broad statement asking the "degree to which the child displays inappropriate behavior among peers". Scales that would also be included in this description are those which simply say "rate the child from 1 to 5 on XYZ dimension" with no behavioral anchors or descriptions for three or more of the points along the scale.
9) the scale is overly concerned with problem behaviors, rather than with appropriate, adaptive, or degrees of normal behavior.

10) the scale is standardized for mentally retarded individuals only.

As a result of the rather small set of scales applicable to these behaviors, and the large number of problems with most scales in that set, the authors developed their own scale in order to best measure these behaviors for the population of concern. A copy of the scale and the instructions for scoring the VPAE, as they appear in the accompanying scale booklet, may be found in Appendix II.

Because the VPAE scale was designed to circumvent the common problems of other existing scales, the VPAE possesses the following list of advantages over most of the 32 scales reviewed.

1) it provides a measure of four of the most important behaviors of concern for severely maladaptive children under age 12.
2) it provides objective descriptions of the behaviors measured in each category.
3) it provides a simple, time-efficient way of evaluating these behaviors--less than 5 minutes per child per rater plus 5 minutes or less per child for tabulation.
4) it employs unidimensionality--different aspects of behavior in each category can be evaluated separately.
5) it also provides an overall measure of functioning in each category.
6) data is presented not only ordinally, but on an interval scale.
7) it facilitates sampling a large number of people involved with the child, thus obtaining a measure of overall functioning in a number of different environmental settings.
8) it allows for monthly measurements of progress, to facilitate better feedback desirable in a behavioral program.

RATIONALE OF THE VPAE SCALE

The title of the scale was derived from the initial letters of each of the four behavioral categories which the scale measures: Verbal behavior, Peer interaction, Adult interaction, and Emotional behavior. The rationale behind the scale was to divide each of these categories into four dimensions (A,B,C,D) that sample the most important aspects of a child's behavior within a given category. The goal was unidimensionality--each judgment by a rater on each dimension should be of the extent to which a single characteristic or variable applies to a given child. The extent to which one variable applies is determined by five levels in each dimension, ranging from 1 (very low-level or inappropriate) to 5 (very appropriate).

The hierarchy was determined intuitively from the most usual progression of the children who were, or had been, in the authors' facility, thus depicting common behavior patterns of these children. In addition, the authors attempted to devise the scale in such a way so as to be sensitive enough to reflect fairly small changes in behavior when administered monthly, thus facilitating more immediate feedback to the staff regarding the progress of each child and the success of the program in changing behavior in each of the four areas.

COMMENTS ON ADMINISTERING THE SCALE

The scale was developed for functionally retarded, behaviorally maladaptive children between the ages of two and nine years, who are in a residential, educational, and/or therapeutic setting. An attempt was made to make the scale understandable and administerable to parents, thus allowing collaboration of the scores obtained in the above

settings, or a home-bound one. However, this is not well-tested and it is probable the current form may present too much technical language for some parents.

The scale was developed with the intention of being administered monthly, to facilitate a satisfactory interval for staff feedback, as well as to coincide with the frequency of written reports. For most of the children in the authors' facility, this time interval results in deviations from the previous month's score in each category ranging from -0.10 to +0.20. A certain percentage of this variance, of course, is due to inter-rater disagreement.

At this point, it is pure speculation as to what amount of average change should be used as the criterion for frequency of administration. Based on the population of the authors' facility, it is suggested that changes less than ± 0.10 in most children's average scores is an indication of administration being done more frequently than necessary (assuming a facility's program is of average efficiency in producing behavior change). Average changes greater than ± 0.20 would probably indicate that the scale could be administered more frequently. However, there may be no reason to do so if the current frequency adequately meets the needs of the facility's evaluation system and its clientele. Again, consideration must be given, based on collaboration from other data, to the efficiency (or inefficiency) of the given program. For an unusually efficient program, monthly evaluation may be too infrequent.

The determination of which individual staff rate each child for each administration of the scale is highly dependent on the structure of the program. The basic guideline suggested would be to choose those staff for each child who are most intimately

and consistently conscious of the child's current behavioral characteristics, making an attempt to equalize the number and positions of staff rating each child. Attempts should be made to secure a number of raters who will rate the child's behavior from different perspectives (e.g., residential, school, social worker, and administrative staff) to obtain the best sampling of each child's overall behavior. Those staff rating each child should have first-hand knowledge of the child's behavior, and should be encouraged to use first-hand knowledge only in determining their ratings.

To further minimize inter-rater disagreements, it is suggested that wherever, and to the maximum degrees possible, the same staff rate all children. Although the authors have strived to write the behavioral descriptions within the scale as specifically and objectively as possible in order to minimize subjectivity, it is impossible, using a rating scale based on past recollections, to completely eliminate all subjective factors which may enter into the assignment of ratings. For example, one staff may be more inclined to remember more negative, or inappropriate behaviors of one child than of another. By maintaining essentially the same sample of raters, it seems reasonable to assume that such differences will be cancelled out over a population of children.

In terms of the number of staff to be chosen, it is suggested that no less than three raters per child would represent an adequate sampling of behavior. Using ratings from more than ten raters per child would probably add unnecessary bulk to the tabulations, especially if the population of children sampled is also large, without adding to the range of behavior samples. The rule of thumb used in the authors' facility has been to choose

two or three staff from each environmental situation who are capable of rating all children.

The estimated administration time for each rater is a maximum of five minutes per child rated, and even less once the rater becomes more familiar with the scale structure and terminology. Overall, the total staff rating time using nine informants is approximately one-half hour per child rated.

STATISTICAL ANALYSES OF THE SCALE

Although the population for which the scale was developed, and to which the scale was originally administered is small (N = 12), the reliability and validity measures are encouraging, particularly when many existing scales lack such measures. Inter-rater reliability for eight to nine raters, stated in terms of r^2, varies for the individual dimensions between 0.81 and 0.95 for verbal behavior, 0.60 and 0.82 for peer interaction, 0.63 and 0.78 for adult interaction, and 0.59 and 0.76 for emotional behavior. The r^2 for the entire scale was 0.64. Converting these figures to the more frequently used statistic, r for inter-rater reliability, would result in rs greater than 0.77 for peer interaction and emotional behavior, and rs greater than 0.82 for adult interaction and 0.90 for verbal behavior.

Optimal scaling, using a computer program, was performed on the scale to determine the true scale values of each of the five levels, one through five, for each dimension, as well as determining composites for each category, and a total composite for the entire scale. For example, the true scale values for the composite of the emotional behavior category were 1.00, 1.96, 3.12, 4.25 and 5.00, compared to the *a priori* scale of 1.00, 2.00, 3.00,

4.00 and 5.00. After the determination of true scale values, a correlation was computed with the a priori scale for all dimensions and category composites, as well as for the scale as a whole. The correlation equalled 0.95 and above for all these measures, with the exception of one dimension in verbal behavior which obtained a correlation of 0.76 (indicating the need for some revision of that dimension at a later date). Due to the extremely high correlation on all but one dimension, the inconvenience of using the obtained-scale values (which were slightly different for every dimension) was deemed unnecessary. For this reason, the levels bear the numbers of the a priori scale. See Table I for the obtained scale values, reliability and correlation measures.

A large number of validity measures were also computed. Due to the small population, strict interpretation of these measures would be tenuous at best, but they do lend some credibility to the scale by indicating probable tendencies that might be obtained from a larger population.

A ranking task by six naive professional people was performed as a check for the ordinal validity of the individual dimensions. This task consisted of writing the descriptions of behavior for each level of a given dimension on small flash cards, which were labeled with non-ordinal or -alphabetical symbols. The five descriptions for each dimension were shuffled and clipped together, thus producing 16 groups of five cards, each labeled by category and dimension. The raters were given a ranking sheet with the category and dimension labels, and five spaces for each dimension to record the symbols corresponding to the order each rater assigned to the cards. The headings above the five spaces were simply labeled "1", "2", "3", "4", and "5",

Table I.

CATEGORY	DIMENSION	1	2
Verbal Behavior	A	1.00	2.22
	B	1.00	1.29
	C	1.00	1.78
	D	1.00	2.58
	Composite	1.00	2.42
Peer Interaction	A	1.00	1.38
	B	1.00	1.82
	C	1.00	1.56
	D	1.00	3.68
	Composite	1.00	1.83
Adult Interaction	A	1.00	1.32
	B	****	2.00
	C	1.00	1.45
	D	1.00	1.55
	Composite	1.00	1.54
Emotional Behavior	A	1.00	1.41
	B	1.00	1.49
	C	1.00	1.84
	D	1.00	2.10
	Composite	1.00	1.96
ALL CATEGORIES COMBINED		1.00	1.87

* Correlation of obtained scale values with a priori scale (1.00, 2.00, 3.00, 4.00, 5.00)

** Inter-rater reliability stated in terms of r^2

OBTAINED SCALE VALUES AND CORRELATIONS

3	4	5	r*	r^{2}**	r***
2.75	4.86	5.00	0.99	0.95	0.98
1.56	1.73	5.00	0.76	0.92	0.96
2.68	3.14	5.00	0.98	0.82	0.90
3.48	4.65	5.00	0.99	0.91	0.96
3.78	4.48	5.00	0.98	0.81	0.90
2.68	3.45	5.00	0.99	0.82	0.91
2.89	3.95	5.00	0.99	0.75	0.86
2.43	3.75	5.00	0.99	0.72	0.85
4.10	5.00	4.03	0.95	0.60	0.78
3.08	4.34	5.00	0.99	0.62	0.79
1.89	2.86	5.00	0.97	0.75	0.87
3.39	4.27	5.00	0.99	0.78	0.89
2.28	3.23	5.00	0.99	0.74	0.86
2.36	4.18	5.00	0.99	0.68	0.82
2.51	3.75	5.00	0.99	0.69	0.83
2.42	3.50	5.00	0.99	0.76	0.87
2.33	3.23	5.00	0.99	0.67	0.82
2.52	3.90	5.00	0.99	0.59	0.77
3.63	4.63	5.00	0.99	0.60	0.77
3.12	4.25	5.00	0.99	0.60	0.77
3.20	4.27	5.00	0.99	0.64	0.80

*** Inter-rater reliability stated in terms of r

**** In this dimension, no ones (1.00) were assigned to any child, therefore optimal scaling begins with 2.00.

from left to right. The written instructions read, "For each dimension, five levels of behavior are described. Rank each group of five in order of what you feel to be increasingly more appropriate or mature behavior. Level 1 is least appropriate; Level 5 is most appropriate. Use the non-ordinal symbols to designate your choices." An example was given, demonstrating the placement of one symbol under each of the five numbers, unaccompanied by any behavioral descriptions to cue the rankers to the authors' construction rationale. The six numbers (rank orders) assigned to each dimension were totalled, and this number used to determine the raters' rank ordering, which was compared to the *a priori* scaling by means of a Spearman Rank correlation coefficient. As can be seen in Table II, Hypothesis I, for all correlations $r_s \geq 0.98$, $p \leq 0.01$.

Composites for the VPAE, computed for each child by averaging all 16 dimensions of the scale, were compared with both respective social ages and social quotients obtained on the Vineland Social Maturity Scale by use of a Spearman correlation, shown in Table II, Hypothesis II. As can be seen from this table, the VPAE composite correlates more highly with social age than with social quotient, which is a measure relative to the child's chronological age. Although an attempt was made to construct the scale somewhat relative to age-appropriate behavior for children under nine, this result probably indicates that it is slightly better at rating absolute rather than age-relative levels of behavior. However, both correlations are within very respectable ranges of significance for their high, positive relationships, indicating that the authors were partially successful in meeting the "age-appropriate" goal.

As one check for face validity, twelve staff were asked to rank order the residential population in terms of each of the four behavior categories, without consulting any of the scale descriptions, in terms of children exhibiting "highest to lowest" level of behavior in each category. The rank orders assigned to each child were added, and this number used to determine each child's placement in the ranking. This derived rank order was compared with the rank order of actual scores in each VPAE category, obtained when the scale was administered one week earlier, by means of a Spearman correlation coefficient. As shown in Table II, Hypothesis III, for each category, $r_s \geq 0.90$, $p \leq 0.01$. These results essentially duplicated those obtained from the same statistical analysis performed eight months earlier.

A number of correlations were computed between the VPAE scale and selected, relevant percentages obtained from the General Recording Form, a technique of observational recording consisting of a set of 13 pre-defined behaviors developed by the authors for use with the population of their facility. The General Recording Form (GRF) is administered once per month on each child via ten random, 10-minute observations conducted within a one-week period. The frequency with which a child displays each of 13 behaviors is tallied within each 10-minute period, by recording each separate instance of any of the behaviors.

The 13 behaviors consist of six appropriate behavior categories and seven inappropriate behavior categories. The six appropriate behavior categories are appropriate play, appropriate speech, task behavior, appropriate non-verbal interaction, cooperation (when the cooperative behavior does not fit another appropriate category) and general appropriate (behavior which doesn't fit any of the other appropriate behavior categories, and yet is obviously

not inappropriate, such as standing or walking). The seven inappropriate categories are self-stimulation, object manipulation, disruptive behavior (crying, tantruming or causing undue noise in other ways), inappropriate speech, aggression, noncooperation (unless the noncooperative behavior fits another inappropriate category), and general inappropriate (including "mischief" behavior and disobedience not immediately preceeded by an adult demand to refrain from the behavior).

All but two behavior categories are defined as specifically [illegible] consistently as possible for all children while still attempting to account for all possible behavioral variations that may be subsumed to belong within that category. Appropriate speech and inappropriate speech, in contrast, possess some interchanges dependent upon the individual child. These interchanges occur by making some very gross differentiations between speech behaviors which may be essentially identical yet exhibited by two children whose current exhibited speech abilities are at opposite ends of the spectrum. For example, an approximation of a word would be coded "appropriate" for a child who typically uses only isolated sounds; it would be coded "inappropriate" for a child who uses sentences fluently.

The CRF also enables the observer to record how each behavior was consequated by adults in the situation (for example, positive reinforcement, punishment, neutral reward, or ignoring) as well as adult demands made upon the child (for example, directives, questions, contractual statements or nonverbal directives such as prompts) and the child's response to such demands. However, neither consequation nor adult demands were used in the correlations with the VPAE scale: the child's percentage of compliance with adult demands was used in a correlation with the Adult Interaction score.

The behavior tallies from each observation are transferred to a tabulation sheet where a total number of instance in each category is obtained, as well as a total number of instances of all behavior. Each category total is then computed as a percentage of the total number of behavior instances which the child exhibited during all the observations.

The GRF allows a computation of overall appropriate and inappropriate behavior percentages by totalling the six appropriate behavior categories and the seven inappropriate behavior categories. The mutually exclusive percentages by comparison with previous months' data, provide one measure of overall improvement or deterioration, divorced from the monthly fluctuations within each category. Such monthly fluctuations may simply be the result of a child decreasing in one appropriate (or inappropriate) behavior and compensating by increasing in another appropriate (or inappropriate) behavior; or, when taken as a whole, may demonstrate a trend toward more appropriate (or inappropriate) behavior.

The General Recording Form was developed three months before the earliest version of the VPAE, and had been in use for 11 months before the authors attempted to correlate it with the current version of the VPAE. The VPAE and the GRF were developed and used independently; in writing the revised VPAE, no intentional overlap was considered with the General Recording Form. None of the operational definitions of the GRF exactly duplicate the scale descriptions, due to the fact that the scale was developed for behaviors that are difficult to measure with such an instrument. For this reason, the number of possible correlations between the two instruments is limited. In addition, some attempts to compare the two instruments within behavioral areas which would seem should be logically

Table II. Spearman Rank Correlation Coefficients between the VPAE & Selected Variables

HYPOTHESIS I:

A direct relationship exists between the a priori rank order of scale items 1 through 5 in each dimension, and the obtained rank order of independent scale items in a ranking task by six naive persons.

H_o: No relationship exists.

H_o rejected.

For all dimensions of all categories, except dimension 'C' of Emotional Behavior, $r_s = 1.00$ $p - 0.01$ $df = 4$

For dimension 'C' of Emotional Behavior, $r_s = 0.98$ $p - 0.01$ $df = 4$

HYPOTHESIS II:

A direct relationship exists between the overall (all categories combined) V.P.A.E. composite and scores obtained on the Vineland Social Maturity Scale.

H_o: No relationship exists.

Vineland, Social Age: H_o rejected

$r_s = 0.886$ $p - 0.02$ $df = 5$

Vineland, Social Quotient: H_o rejected

$r_s = 0.829$ $p - 0.02$ $df = 5$

HYPOTHESIS III:

A direct relationship exists between obtained ranks for each category composite of the V.P.A.E. Scale and staff rankings of children in terms of each category.

H_o: No relationship exists

Verbal Behavior: H_o rejected

$r_s = 0.943$ $p - 0.01$ $df = 5$

Peer Interaction: H_o rejected

$r_s = 0.90$ $p - 0.01$ $df = 5$

Adult Interaction: H_o rejected
$r_s = 1.00$ $p = 0.01$ $df = 5$
Emotional Behavior: H_o rejected
$r_s = 0.943$ $p - 0.01$ $df = 5$

Table III. Spearman Rank Correlation Coefficients between the VPAE & Observational Recordings

HYPOTHESIS I:

A direct relationship exists between the overall (all categories combined) V.P.A.E. composite and recorded overall appropriate behavior.

H_o: No relationship exists
H_o rejected.
$r_s = 0.886$ $p - 0.02$ $df = 5$

HYPOTHESIS II:

A direct relationship exists between the verbal composite and recorded appropriate speech.

H_o: No relationship exists.
H_o rejected.
$r_s = 0.886$ $p - 0.02$ $df = 5$

HYPOTHESIS III:

A direct relationship exists between the emotional composite and a lack of recorded disruptive behavior.

H_o: No relationship exists.
H_o rejected.
$r_s = 0.871$ $p - 0.02$ $df = 5$

marked on.

To facilitate tabulation, the order in which children are to be rated should be chosen previous to administering the scale. Implementing this order may be done by writing the children's initials in the "child" blank at the top of each scoring form or, by announcing the order when forms are distributed; or, by specifying that children be ranked in alphabetical, or youngest-to-oldest order. Tabulation operations can be performed with any simple calculator or an adding machine which performs division.

Example 1

Scoring Form

Child's Name: AB CD

Level:	1 2 3 4 5	1 2 3 4 5
VERBAL	A A (A) A A B B B (B) B C (C) C C C D D (D) D D	A A A A (A) B B B (B) B C C C C (C) D D D D (D)

Child AB demonstrates the first step in tabulation; Child CD demonstrates all the steps completed across all raters, i.e., nine.

Tabulation - Short Form

CHILD:	AB	CD
Verbal	12+	19+20+18 19+19+20 19+19+19
Composite	/ =	172/36 = 4.78

Method number one: short form tabulation. Begin by totalling the numbers circled in each cell of each scoring form, and writing them in a lower corner of each cell. In Example 1, child AB's total is 3 + 4 + 2 + 3, or 12. Transfer the cell totals to the corresponding cell of the tabulation short form, until all ratings have been transferred. Total the numbers in each cell of the tabulation form. In the example, child CD's total is 19 + 20 + 18 + 19 + 19 + 20 + 19 + 19 + 19, or 172 for nine raters. Record this number as a numerator in the left hand side of the "composite" section for each cell. The denominator is determined by multiplying the number of totals in the cell by the 4 dimensions (in the example, 9 raters X 4 = 36). Each child's category averages are computed by division and rounding to two-place decimals. All that remains is to transfer the category averages for each child to the file report-short form.

Method number two: long form tabulation. For each rating assigned on each scoring form, place a hash mark in the corresponding position under each child's name on the tabulation form. The tabulation form section for Child EF in Example 2 demonstrates this step. Continue this procedure for all children on all the scoring forms. The column marked "T/M" is for dimension totals (T), written to the upper left of the diagonal, and dimension means (M), written to the lower right of the diagonal. To obtain the dimension totals, multiply the number of ratings at each level by the level number, and total together. For example, dimension A for child GH would be (1 X 3) + (6 X 4) + (2 X 5), or 37. Dimension totals should be written as a numerator and the number of ratings in each dimension should be written as a denominator in the "T" position of the cell. Division of the numerator by the denominator yields a decimal, which should be rounded to

two places. For "T" for the category composite, total the numerators in that category, recording this also as a numerator. For child GH, 37 + 29 + 31 + 44 = 141. Repeat the same process for the denominators under "T". Division, rounded to two places, yields the category composite. Transfer the dimension averages, and category composites to the file report-long form.

POSSIBLE REVISIONS AND FUTURE DEVELOPMENT

Based on the statistical analyses on the small population which has been summarized here, it would appear that Dimension B of Verbal Behavior, regarding the relationship of the child's verbalizations to the situation, should be revised. This dimension had the lowest correlation between the obtained scale values computed by optimal scaling and the *a priori* scale values. The Spearman r_s for this computation was 0.76, compared to 0.95 or above for all other dimensions of the scale. However, it is possible that the population of the authors' facility exhibit a narrower range of behavior in relation to this dimension, than on the other dimensions of the scale, thus causing the obtained scale values to be consistently lower than the *a priori* values. A very high percentage of the children in this population possess speech that is inappropriate to the situation.

Three other dimensions indicate the need for revision in order to improve or maximize inter-rater reliability. These are Dimension D of Peer Interaction (which is concerned with the child's reaction when another child aggresses or "bullies" him), Dimension C of Emotional Behavior (concerned with the stimuli which bring on negative or emotional displays in the child), and Dimension D of Emotional Behavior (which attempts to quantify how

Example 2

Scoring Form

Child's Name: EF GH

Level:	1 2 3 4 5	1 2 3 4 5
VERBAL	A A (A) A A (B) B B B B (C) C C C C D D (D) D D	A A A (A) A B B (B) B B C C C (C) C D D D D (D)

Child EF demonstrates the first step in tabulation: Child GH demonstrates all the steps completed across all raters, i.e., nine.

Tabulation - Long Form

CHILD:	EF						GH					
	1	2	3	4	5	T/M	1	2	3	4	5	T/M
Verbal A			1						1	𝍸 1	11	37/9 / 4.11
B		1							𝍸 11	11		29/9 / 3.22
C	1								𝍸	1111		31/9 / 3.44
D			1							1	𝍸 111	44/9 / 4.89
Composite	1	2	3	4	5		1	2	3	4	5	141.33 / 3.92

frequently the child elicits positive responses which are situation-appropriate). It is possible that the reliabilities obtained in the two emotional dimensions may be acceptable, given the nature of the behavior which is being rated. To obtain an inter-rater reliability of 0.77 when rating a behavior as difficult to objectify as emotional behavior is better than could be expected. It would seem that some minor revisions could significantly improve the inter-rater reliability (r) for Peer-D, since these behaviors should be more easily objectified. The inter-rater reliability for this dimension of 0.78 was entirely responsible for lowering that r for the entire category below 0.85, to 0.79.

The intention of the authors is to make the scale available to other facilities who will agree to furnish their data to the authors, so as to facilitate further necessary revisions based on a large population. The result of this process should be a scale which is applicable to a wider age-range and a more variable population of "severely maladaptive children". Through this process it should be possible to further standardize the instructions for scoring and the administration techniques, thus hopefully improving some of the reliability and validity measures.

Lastly, it is hoped that this scale may serve as a model for further extension or development of similar scales for other behaviors that are difficult to measure through the use of standard observational techniques or the set of reviewed scales. Such an extension, either by the authors or by other researchers, may add additional behavior categories for use with the target population of the present VPAE; or, it may involve similar and/or additional categories of behavior for other populations. For example, it is presumed that data from behavior

categories similar to the VPAE may be beneficial to administrators of adolescent group homes (with the exception of Verbal Behavior). It is also presumed that revised categories of Peer Interaction and Emotional Behavior could be utilized in some adult half-way houses or state mental institutions, if existing scales targeted at those populations are not satisfactory. One additional category which may be of particular interest for adolescents and adults would rate self-initiation or self-direction behavior.

The authors have attempted to develop some needed measures which are consonant with a behavioral program. The possibilities for utilizing this model hopefully will make a significant contribution to the field of behavioral therapy.

REFERENCES

Balthazar, E. E. Symposium 12: Assessment of adaptive behavior. Proceedings of the Second Congress of the International Association for the Scientific Study of Mental Deficiency. Warsaw, Poland: 1970.

Bentler, P. M., & Nivette, J. D. An implicit metric for ordinal scales: Implications for assessment of cognitive growth. In D. R. Green, M. P. Ford, & G. B. Flamer (Eds.), Measurement & Piaget: Proceedings of the CTB/McGraw-Hill Conference on ordinal scales of cognitive development. New York: Wiley, 1960.

Berko, J., & Brown, R. Psycholinguistic research methods. In P. H. Mussen (Ed.), Handbook of research methods in child psychology. New York: Wiley, 1960.

Bock, R. D. Methods and applications of optimal scaling. The Psychometric Lab, Report No. 25. Chapel Hill: University of North Carolina, 1960.

Bock, R. D., & Haggard, E. A. The use of multivariate analysis of variance in psychological research. In D. Whitla (Ed.), Handbook of measurement in education, psychology and sociology. Boston: Addison-Wesley, 1965.

Buros, O. K. (Ed.) The 5th mental measurements yearbook. Highland Park, N. J.: Gryphon Press, 1959.

Buros, O. K. (Ed.) Tests in print: A comprehensive bibliography of tests for use in education, psychology and industry. Highland Park, N. J.: Gryphon Press, 1961.

Buros, O. K. (Ed.) The 6th mental measurements yearbook. Highland Park, N. J.: Gryphon Press, 1965.

Buros, O. K. (Ed.) Personality tests and reviews. Highland Park, N. J.: Gryphon Press, 1970.

Buros, O. K. (Ed.) The 7th mental measurement yearbook. Highland Park, N. J.: Gryphon Press, 1972.

Doll, E. A. Vineland social maturity scale. Circle Pines, Mn.: American Guidance Service, Inc., 1965.

Gardner, J. J., & Giampa, F. L. Utility of three behavioral indices for studying severely and profoundly retarded children. American Journal of Mental Deficiency, 1971, 76, 352 - 356.

Gunzburg, N. C. Progress assessment chart. London: National Association for Mental Health, 1965.

Kanfer, F. H. Assessment for behavior modification. Journal of Personality Assessment, 1972, 36, 418 - 423.

Mussen, P. H., Conger, J. J., & Kagan, J. Child development and personality. New York: Harper & Row, 1969.

Nebraska, State of. Community/Regional Services, Inc. Nebraska client progress system. Lincoln, Nb., 1973.

Nihira, K., Foster, R., Shellhaas, M., & Leland, H. Adaptive behavior scale. Washington, D.C.: American Association on Mental Deficiency, 1969.

Proger, B. B. Test review no. 12: Balthazar scales of adaptive behavior: Section I. Journal of Special Education, 1973, 7, 95 - 101.

Sailor, W., & Mix, B. J. TARC assessment system. Lawrence, Kansas: H & H Enterprises, 1975.

Senter, R. D. Analysis of data: Introductory statistics for the behavioral sciences. Glenview, Ill.: Scott, Foresman, 1969.

Siegel, S. Nonparametric statistics. New York: McGraw-Hill, 1956.

Spivack, G., & Levine, M. The Devereux child behavior rating scales: A study of symptom behaviors in latency age-atypical children. American Journal of Mental Deficiency, 1964, 68, 700 - 717.

Steger, J. A. (Ed.) Readings in statistics for the behavioral scientist. New York: Holt, Rinehart & Winston, 1971.

Torgerson, W. S. Theory and methods of scaling. New York: Wiley, 1958.

Zedeck, S., Imparato, N., Krausz, M., & Oleno, T. Development of behaviorally anchored rating scales as a function of organizational level. Journal of Applied Psychiatry, 1974, 59, 249 - 252.

APPENDIX I. LIST OF SCALES REVIEWED AND REFERENCE LIST OF PROBLEMS

Appendix I consists of the list of the 32 scales which are related to the content and target population of the VPAE Scale.

Problem reference numbers refer to the list of ten commonly encountered problems which are briefly listed at the end of the List of Scales Reviewed.

APPENDIX I

NAME OF SCALE / Author(s)	MMY, PT&R or TIP number
ADAPTIVE BEHAVIOR SCALE / Nihira, Foster, Shellhass & Leland	MMY 7 - 37
AFFECTIVITY INTERVIEW BLANK / Fuller	TIP '61 - 105 MMY 4 - 29
BALTHAZAR SCALES OF ADAPTIVE BEHAVIOR/ Balthazar	- -
BEHAVIORAL DIMENSIONS RATING SCALE/**	- -
BURKS' BEHAVIOR RATING SCALE / **	MMY 7 - 46
(CAIN-LEVINE) SOCIAL COMPENTENCY SCALE/ Cain, Levine, Elzey (see next entry)	MMY 6 - 69 MMY 7 - 48
CALIFORNIA PRE-SCHOOL SOCIAL COMPETENCY SCALE / Levine, Elzey, Lewis (see previous entry)	MMY 7 - 48
CHILD BEHAVIOR RATING SCALE / Cassel	MMY 6 - 74a MMY 7 - 52

* MMY - MMY 6 refers to Buros' Sixth Mental Measurement Yearbook. PT & R - refers to Personality Tests and Reviews, Buros, 1970. TIP '61 refers to Tests in Print, Buros, 1961.

** Designates information which was unobtainable through normal library reference channels.

LIST OF SCALES REVIEWED

Population	Time	V P A E Correlates	Problem *** Reference
3 - 12 yr.; 13 yr. and over	20-25 min.	V P A E	4a, 10; V-3, E-8,P & A-1
7 - 12 yr.	15 min.	E	2, 8
All ages, SMR & PMR ambulatory	60-120 min.	V P A E	4d, 10; V-3, P,A, & E-3,7
**	**	**	**
Preschool & k; Grades 1 - 8	10 min.	A E	7, 8, 9
MR 5 - 13 yr.	(7 pp.)	V P A	4,10; P & A-1
2.5 - 5.5 yr.	(4 pp.)	P A	1, 5
Grades k - 3	5-10 min.	V P A	8; A & P-1

*** Refers to the numbered list of problems given in text. All entries refer to the scale in general, unless preceeded by the letters V,P,A, or E, which means the entry refers to only that portion of the scale which correlates with the respective VPAE category.

APPENDIX I. (continued

NAME OF SCALE / Author(s)	MMY, PT&R or TIP number
CHILDREN'S BEHAVIOR RATING SCALE / Burdock & Hardesty (Children's Behavior Diagnostic Inventory)	TIP '61 - 116
COMMUNICATIVE EVALUATION CHART FROM INFANCY TO 5 YEARS / Anderson, Miles, Matheny	MMY 7 - 949
COMPREHENSIVE BEHAVIOR CHECKLIST / Gardner	--
DETROIT ADJUSTMENT INVENTORY / Baker	MMY 5 - 46 TIP '61 - 141
DEVEREUX CHILD BEHAVIOR RATING SCALE / Spivack & Spotts	MMY 7 - 67
DEVEREUX ELEMENTARY SCHOOL BEHAVIOR RATING SCALE / Spivack & Swift	MMY 7 - 68
HAGGERTY-OLSON-WICKMAN BEHAVIOR RATING SCHEDULES / Haggerty, Olson, Wickman	TIP '61 - 177 MMY '40 - 1222
HOUSTON TEST FOR LANGUAGE DEVELOPMENT/ Crabtree	MMY 6 - 301 MMY 7 - 953

LIST OF SCALES REVIEWED

Population	Time	V P A E Correlates	Problem*** Reference
1 - 16 yr.	**	**	**
Infant - 5 yr.	**	V	**
**	**	**	**
Delta: 5-8 yr. Gamma: Grades 3-6	(64 items)	P A E	4; gamma is self-answered
ED & MR 8 - 12 yr.	10-20 min.	P A E	2, 9
Grades k - 6	10 min.	A	2, 9
Grades k - 12	**	A E	**
6 mo. - 3 yr. 3 - 6 yr.	30 min.	V	4a: 1, 8

APPENDIX I. (continued

NAME OF SCALE / Author(s)	MMY, PT&R or TIP Number
MULTIDIMENSIONAL MATURITY SCALE / Hartman	MMY 7 - 111
NEBRASKA CLIENT PROGRESS SYSTEM / Community Regional Services Inc.	--
PERSONAL ADJUSTMENT INVENTORY / Rogers	MMY 6 - 154
PERSONAL & SOCIAL DEVELOPMENT PROGRAM/ Flannagan	MMY 5 - 92
PERSONALITY EVALUATION FORM / Buhler & Howard	MMY 5 - 94
PRESCHOOL LANGUAGE SCALE / Zimmerman, Steiner, Evatt	MMY 5 - 965
PROGRESS ASSESSMENT CHART / Gunzburg	MMY 6 - 165
PUPIL ADJUSTMENT INVENTORY / Group B, Suburban School Study Council, University of Pennsylvania	TIP '61 - 266 MMY 5 - 100
Q-TAGS TEST OF PERSONALITY / Storey & Masson	MMY 7 - 131

LIST OF SCALES REVIEWED

Population	Time	V P A E Correlates	Problem*** Reference
Grades k - 12	(3 pp.)	P A E	2, 8
Infant to Adult	**	V P A	1, 2, 6, 7; V-3; P-2, 3; A-3
9 - 13 yr.	40-50 min.	P A	2, 4c, 8, 9
Grades k - 9	(Antecdotal)	P A	1, 2, 8
2 yr. - Adult	(12 pp.)	P A E	1, 6, 8
2 - 6 yr.	30 min.	V	2, 3, 4a
MR, Infant to adult	(2-3 pp.)	V P A	1, 10
Grades k - 12	Short form (screening): 5-15 min. Long: 2 - 5 hr.	P A E	2, 4d, 8; out of print as of 1974.
6 - 12 yr.; 12 yr. & over	60-80 min.	P A F	4d, 9

APPENDIX I. (continu

NAME OF SCALE / Author(s)	MMY, PT&R or TIP number
REYNELL DEVELOPMENT LANGUAGE SCALE/ Reynell	MMY 7 - 966
STAMP BEHAVIOR STUDY TECHNIQUE / **	PT & R - 256
TARC ASSESSMENT SYSTEM / Sailer & Mix	--
UTAH TEST OF LANGUAGE DEVELOPMENT / Mecham, Jex & Jones (see next entry)	MMY 7 - 973
VERBAL LANGUAGE DEVELOPMENT SCALE / Mecham	MMY 6 - 316 MMY 7 - 974
VINELAND SOCIAL MATURITY SCALE / Doll	MMY 6 - 194 TIP '61 - 314 PT & R - 281
WALKER PROBLEM BEHAVIOR IDENTIFICATION CHECKLIST / Walker	MMY 7 - 159

ed)

LIST OF SCALES REVIEWED

Population	Time	V P A E Correlates	Problem*** Reference
1 - 5 yr. with delayed or deviant language development	20 min.	V	2, 3, 4a
Pre-school & k	15-45 min. (after observations)	V P A E	2, 4d, 8
Functionally retarded, 3 - 16 yr.	15-20 min.	V P A E	3, 4a, 5; 10 (with qualifications)
1.5 - 14.5 yr.	30-45 min.	V	1, 2, 4b; employs a "direct test" method - ?
Infant to adult	30 min.	V	4a, 8
Infant to adult	20-30 min.	V P A	1, 3 (especially above 3 yr.), 4a, 5
Grades 4 - 6	2-5 min.	P E	2, 9 (intended only for screening-?)

Briefly, the ten problems notated by "problem reference number" in the List of Scales Reviewed are as follows:

1) the scale lacks individual measures of one or more of the VPAE behavior categories with which it correlates.
2) the end points of the scale are inappropriate for some or all of the children in the authors' facility population.
3) scale steps or intervals are too large to demonstrate monthly progress.
4) a large time investment is necessary for administering the scale, ranging from 15 minutes (a) to 60 minutes or more (d) per child per rater.
5) the source of ratings is only one person or one observational sample.
6) data is presented nominally or categorically.
7) separate scores within behavioral categories are produced, lacking a measure of overall functioning in that category.
8) ratings are based on subjective, non-specific, antecdotal or Freudian terms or theory.
9) the scale is overly concerned with problem behaviors.
10) the scale is standardized for mentally retarded individuals only.

A more detailed explanation of this list can be found in "Background of the VPAE Scale", on page 2.

APPENDIX II. INSTRUCTIONS FOR SCORING THE VPAE AND THE VPAE SCALE

Appendix II consists of the contents of the scale booklet used by raters, reduced to 60% of actual size.

INSTRUCTIONS FOR SCORING THE VPAE

The behavior of each child is rated in each of four categories--Verbal Behavior, Peer Interaction, Adult Interaction, and Emotional Behavior. In turn, each category of behavior is subdivided into four dimensions--important variables that help determine a child's overall behavior in terms of that category. Each dimension is expressed in terms of increasingly more appropriate behavior, progressing horizontally from Level 1 (least appropriate) to Level 5 (most appropriate).

The scoring form is constructed in similar fashion, with cells for rating each child's behavior in terms of each of the four categories via the 16 dimensions.

The judgment of a child's rating for each of the dimensions should be based on his most usual behavior during the period of approximately the last week. Under each child's name, circle the letter corresponding to the level most closely approximating his behavior on each of the lettered lines. (Refer to the level numbers which are specified directly below the child's name.) For each child, for example, in each category of behavior, one "A" should be circled, one "B", one "C" and one "D". (See example below.)

When rating several children, time is saved by rating all children on one category, then all on the next category, etc.

VPAE SCORING FORM

Rater's Name John S. Date 12/3/75

Child's Name: Ann Sue Dick Kay Alan Mary

	Level: 1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
VERBAL	A (A) A A A B B (B) B B (C) C C C C D D (D) D D	A A A (A) A B B (B) B B C C C (C) C D D D (D) D	(A) A A A A (B) B B B B (C) C C C C (D) D D D D	A A (A) A A B B B (B) B C C (C) C C D D (D) D D	A (A) A A A (B) B B B B (C) C C C C (D) D D D D	A A A A (A) B B B (B) B C C C (C) C D D D D (D)
PEER	A A A (A) A B B (B) B B C (C) C C C D D (D) D D	A A A A (A) B B B (B) B C C C (C) C D D D D (D)	A (A) A A A B (B) B B B (C) C C C C D (D) D D D	A (A) A A A B B (B) B B (C) C C C C D D (D) D D	A A A (A) A B B (B) B B C (C) C C C D (D) D D D	A A A (A) A B B B B (B) C C (C) C C D D D (D) D

VERBAL BEHAVIOR

	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5
A	Sounds only.	Non-words, plus single words and names of objects.	Generally single words and names of objects.	Generally phrases (two or more words).	Phrases and sentences.
B	Always nonsensical and never related to the situational context.	Usually nonsensical and seldom related to the situational context.	Some verbalizations are related to the situational context.	Generally in the context of the situation (may also relate experiences from other contexts sensibly but in a limited manner).	Almost always in context of the situation as well as relating experiences from other contexts sensibly and with some detail.
C	Possesses no communicative quality.	Seldom communicative.	Possesses occasional but inconsistent communicative quality.	Communicative speech is fairly generalized.	Speech is exclusively communicative.
D	Little or no modeling of single sounds.	Will model sounds or simple words.	Will model one word or word-by-word.	Will model phrases and some sentences.	Will model sentences reliably.

PEER INTERACTION

	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5
A	Avoids proximity, and so also avoids interaction.	Will allow or initiate proximity but no interaction.	Most commonly will allow or establish proximity only. Interactions are usually only offense or defense and /or unstructured, random and brief.	Some cooperative, recurrent interactions occur in specific situations that already possess some structure.	Child frequently engages in interactions and cooperative play and is capable of imposing structure if none exists.
B	Won't initiate interactions and won't tolerate another child's initiation.	Won't initiate interaction, but occasionally tolerates another child's initiation.	Won't initiate interaction, but will usually tolerate another child's initiation.	Tolerates another child's initiation, and will occasionally initiate interaction.	Tolerates other children's initiations and frequently initiates interaction.
C	Does not attend to other children's activities.	Occasionally attends to other children's activities.	Frequently attends to other children's activities.	Frequently attends to other children's activities, and occasionally tries to model or "copy" their behavior.	Frequently attends to other children's activities, and frequently models or "copies" their behavior.
D	Child does not react when another child aggresses against him or steals or disrupts his playthings.	Child usually over-retaliates when another child aggresses against him or steals or disrupts his playthings.	Child retaliates, without over-retaliating, when another child aggresses against him or steals or disrupts his playthings.	Child reacts with verbal protest and occasionally retaliation when another child aggresses against him or steals or disrupts his playthings.	Child reacts with verbal protest when another child aggresses against him or steals or disrupts his playthings.

ADULT INTERACTION

	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5
A	Little or no notice of adults; prefers objects to adults and treats adults as objects.	Limited notice of adults lacking discrimination between them. Frequently oblivious.	Frequently notices adults and starting to discriminate between them by changing behavior accordingly. Has brief periods of being oblivious.	Discriminates between adults by changing his behavior accordingly. Developing good awareness, noticing presence or absence, but not chains of interaction or overall patterns.	Very aware of adults and environment; shows age-appropriate understanding of people's social positions;makes fine discriminations between adults beyond those requiring change in his behavior.
B	No interaction with adults is tolerated by the child.	Any interactions with adults are non-reciprocal and unstructured (characterized by physical contact and rudimentary nonverbal behavior).	Beginning to participate in structured interactions with adults (established interactive patterns: rhymes, finger games, conversation, or goal-oriented activity) if provided by adult; shows some reciprocity.	Will participate in a variety of structured interactions with adults if structure provided by the adult, usually demonstrating reciprocity.	Participates in structured interactions as well as frequently trying to change or impose his own structure.
C	Seldom approaches areas of human activity.	Seeks attention in an infantile or inappropriate manner; child's goal isunsophisticated (purely for "one-way attention").	Frequently seeks attention in a reasonably appropriate manner, but usually goal is unsophisticated.	Initiates in a reasonably appropriate manner, usually for a somewhat sophisticated goal (play, activity, interaction or meeting a physical need).	Frequently initiates interactions, almost always with a sophisticated goal in mind.
D	Little or no compliance; is basically resistive or oblivious, even to physical leads.	Responds to name, "come here", but otherwise very dependent on physical prompts, though seldom resists them.	Responds to some verbal commands and nonverbal cues, but still needs prompting.	Responds to most verbal commands and nonverbal cues with little or no prompting.	Basically very compliant with age-appropriate requests and cues.

EMOTIONAL BEHAVIOR

	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5
A	In terms of polarity of mood (happy - neutral - angry), child exhibits a very high proportion in one.	Child's polarity of mood displays some alternation between the two basic poles.	Child displays some diversity of mood, in that he uses more than two moods (e.g., happy, - sad - fear - angry).	Child displays a fairly wide diversity in emotion.	Child's diversity of emotion is largely age-appropriate, via new refinements and combinations of the four basic moods.
B	On a continuum of emotional expression, the child displays his feelings to an extreme (i.e. tantruming, extreme passivity or activity) which is always inappropriate to the situation.	On a continuum of emotional expression, the child generally displays his feelings to an extreme, which is usually (but not always) inappropriate to the situation.	On a continuum of emotional expression, the child's emotional intensities vary between extreme and mild (appropriately brief and subdued displays of frustration, happiness or anger) and are appropriate to the situation approximately half of the time.	On a continuum of emotional expression, the child's emotional intensities are frequently mild; most, but not all intensities (including extreme) are appropriate to the situation.	On a continuum of emotional expression, the child's emotional intensities are usually mild; when extremes are displayed, they are appropriate to the situation.
C	Most (but not all) emotional displays appear unrelated to an apparent cause.	Negative emotional displays are elicited for many minor reasons such as blocking or interruption of inappropriate behavior, or attempts to present new situations.	Negative responses are elicited reliably for punishment, loss of a strong reinforcer, physical injury, or increased pressure and demands, or in very new situations.	Negative responses are elicited occasionally for punishment, loss of a strong reinforcer, physical injury, or increased pressure and demands, or in very new situations.	Negative responses are elicited for basically age-appropriate reasons.
D	Positive responses (i.e. laughter or affection) that are appropriate to the situation occur two or fewer times per day.	Positive responses that are appropriate to the situation occur three to six times per day.	Positive responses that are appropriate to the situation occur seven to ten times per day.	Positive responses that are appropriate to the situation occur eleven to fourteen times per day.	Positive responses that are appropriate to the situation occur fifteen or more times per day.

49

APPENDIX III. FORMS USED WITH THE VPAE

Appendix III consists of all the forms for the VPAE scale. The use of the first form, the VPAE scoring form, is explained in Appendix II of this manual, as well as in the "Instructions for Scoring the VPAE" in the scale booklet. The use of the other four forms (VPAE Tabulation Short Form, VPAE Tabulation Long Form, File Report Short Form, and File Report Long Form) are explained in this manual under "Tabulation and Computation of VPAE Scores". The two tabulation forms shown here are reduced to 60% of actual size. All forms are available from the authors, as are additional copies of the scale booklet and manual.

VPAE SCORING FORM

Rater's Name_____ Date_____

Child's Name:_____ _____ _____ _____ _____ _____

Level:	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
VERBAL	A A A A A B B B B B C C C C C D D D D D	A A A A A B B B B B C C C C C D D D D D	A A A A A B B B B B C C C C C D D D D D	A A A A A B B B B B C C C C C D D D D D	A A A A A B B B B B C C C C C D D D D D	A A A A A B B B B B C C C C C D D D D D
PEER	A A A A A B B B B B C C C C C D D D D D	A A A A A B B B B B C C C C C D D D D D	A A A A A B B B B B C C C C C D D D D D	A A A A A B B B B B C C C C C D D D D D	A A A A A B B B B B C C C C C D D D D D	A A A A A B B B B B C C C C C D D D D D
ADULT	A A A A A B B B B B C C C C C D D D D D	A A A A A B B B B B C C C C C D D D D D	A A A A A B B B B B C C C C C D D D D D	A A A A A B B B B B C C C C C D D D D D	A A A A A B B B B B C C C C C D D D D D	A A A A A B B B B B C C C C C D D D D D
EMOTIONAL	A A A A A B B B B B C C C C C D D D D D	A A A A A B B B B B C C C C C D D D D D	A A A A A B B B B B C C C C C D D D D D	A A A A A B B B B B C C C C C D D D D D	A A A A A B B B B B C C C C C D D D D D	A A A A A B B B B B C C C C C D D D D D

For use with the VPAE Scale
Copyright, 1975, Darlene Streedbeck & Robert B. Hughes
Problems-In-Living Center, Sioux Falls, S.D.

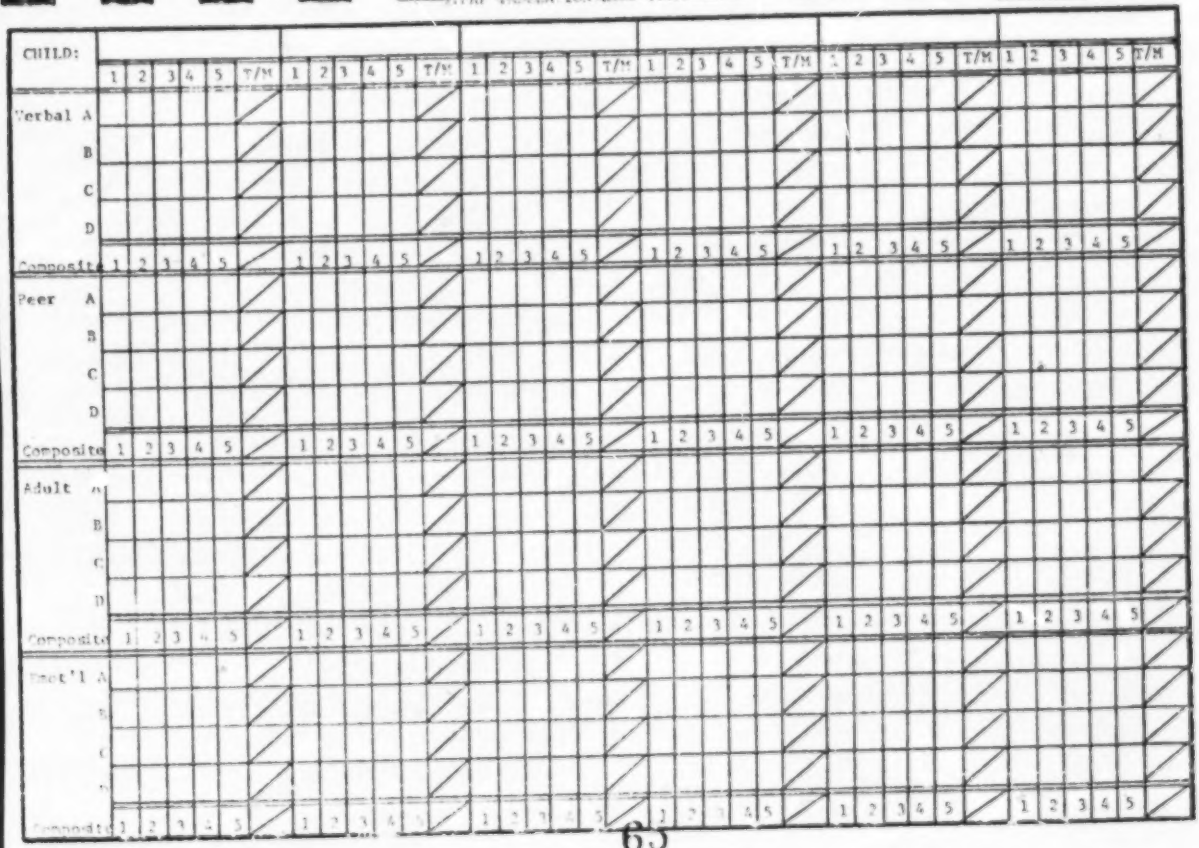
VPAE TABULATION: SHORT FORM

DATE _____

CHILD:												
Verbal												
Composite	/ =	/ =	/ =	/ =	/ =	/ =	/ =	/ =	/ =	/ =	/ =	/ =
Peer												
Composite	/ =	/ =	/ =	/ =	/ =	/ =	/ =	/ =	/ =	/ =	/ =	/ =
Adult												
Composite	/ =	/ =	/ =	/ =	/ =	/ =	/ =	/ =	/ =	/ =	/ =	/ =
Emotional												
Composite	/ =	/ =	/ =	/ =	/ =	/ =	/ =	/ =	/ =	/ =	/ =	/ =

For use with the VPAE Scale
Copyright 1975, Darlene Streedbeck and Robert B. Hughes, Problems-In-Living Center, Sioux Falls, S.D.

[illegible] FORM [illegible] DATE [illegible]



For use with the VPAF Scale
Copyright 1975, Darlene Streedbeck and Robert E. Hughes, Problems-In-Living Center, Sioux Falls, S.D.

57

VPAE FILE REPORT SHORT FORM

CHILD: _____

Date	Verbal	Peer	Social	Emot'l

For use with the VPAE Scale, Copyright, 1975, Darlene Streedbeck & Robert B. Hughes, Problems-In-Living Center, Sioux Falls, S.D.

VPAE FILE REPORT LONG FORM

Child_____

DATE	VERBAL BEHAVIOR					PEER INTERACTION					ADULT INTERACTION					EMOTIONAL BEHAVIOR				
	A	B	C	D	TOTAL	A	B	C	D	TOTAL	A	B	C	D	TOTAL	A	B	C	D	TOTAL

For use with the VPAE Scale
Copyright 1975, Marlene Sitzenbeck and Robert B. Hughes, Problems-In-Living Center, Sioux Falls, S.D.